UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
25 FUNSTON ROAD
KANSAS CITY, KANSAS 66115

Site: Maline Creek
ID # MOD980631162
Break: 1.6
Other:
1-22-93

JAN 22 1993

MEMORANDUM

SUBJECT: CertainTeed Transite Pipe Plant, St. Louis, Missouri, Site Asbestos Evaluation, 12/17/92 (SBR19)

FROM: Paul E. Beatty Paul E. Beatty
Environmental Engineer, AMON/EMCM/ENSV 07KP

30290426
Superfund

1.0

TO: Ronald D. McCutcheon
Branch Chief, EP&R/ENSV

THRU: Joe Arello JA 0400
Chief, Air Monitoring Section, EMCM/ENSV

At the request of the Emergency Planning and Response Branch, Field Removal Section, the Air Monitoring Section conducted an inspection at the retired CertainTeed transite pipe manufacturing facility in St. Louis, Missouri. The purpose of the inspection was to determine the amount and condition of any asbestos containing materials (ACM) on the CertainTeed site. I was accompanied on the inspection by Don Hamera of the Emergency Planning and Response Branch, Field Removal Section

The inspection was performed on December 17, 1992, beginning at 8:30 a.m. and concluding at 4:30 p.m. The weather conditions were as follows; temperature 36°F, northeasterly winds at 5 mph, and 100 percent cloud cover.

Upon arrival at the site, Don Hamera and I spoke with Mark and Mike Kootman, who represented the property owner, PG Investments. Gary Simmons, an asbestos consultant with Geo Technology of St. Louis, Missouri who was hired by the building owners was also present. They were informed of the scope of the inspection and allowed us access to the facility.

There are two large buildings (southwest and northeast), a boiler house and some small buildings on the site. The southwest building is mostly unused except for the northwest end which is used by a trucking company. The northeast building is used by the Branch Metal Co. to store scrap metal. The boiler house is unoccupied, out of service and locked up.

For additional site and sample information, please see the attached Sample Site Diagram (Attachment 1), Sample Summary Sheet (Attachment 2), Chain of Custody Sheet (Attachment 3), Sample

Analysis (Attachment 4) and the Quantification of Material Sheet (Attachment 5). Photographs (Attachment 6) were obtained of the sample sites and the areas inspected. The photographic negatives are attached to the original report.

Mr. Simmons, Mr. Mark Kootman, Mr. Hamera and myself proceeded to an area where Mr. Simmons indicated that a pile of ACM was recently cleaned up. No residual ACM was visible and the area appeared to be properly cleaned. Mr. Simmons also showed us a pipe manifold located on the southwest side of the southwest building. Mr. Simmons said that the ACM was removed, at least 40 linear feet (lf). Mr. Simmons said that full containment was built around the manifold and wet removal methods were used. Mr. Simmons said the insulation was disposed of as ACM. No governmental agency was sent a NESHAP notification. The manifold appeared to be properly cleaned and there was no insulation debris on the ground around the manifold.

Mr. Hamera and I proceeded with the inspection of the rest of the facility site. All of the pipe diameters presented in this report are visual estimates. Measurement of the pipe lengths are estimated by pacing.

The Southwest Building

The large southwest building was inspected first. The amount of insulated pipe was documented. Most of the insulated pipe is suspended under the ceiling.

The southwest building contains a total of at least 1545 lf of block-type pipe insulation of various diameters. Also located in the southwest building is about 415 lf of a heavy cloth-type insulated pipe and about 155 lf of paper-type insulated pipe.

Running down the center of the building is a 10" diameter pipe. The pipe is covered with about 700 lf of a block-type insulation. The insulation and pipe wrap is mostly intact but some of the wrap is torn away exposing the insulation underneath. Towards the southeast end of the building, the pipe deceases to 3" in diameter and is accessible from the 2nd floor deck. At this end, the insulation is damaged and some had fallen onto the floor. Sample SBR19-005 was obtained from the damaged pipe insulation. The block-type pipe insulation was light gray, friable (crushed by finger pressure) and fibrous. Polarized light microscopy (PLM) analysis showed the sample to contain 15% chrysotile asbestos.

Sample SBR19-003 was obtained from the floor under a paper wrapped pipe in bad condition. The sample was a friable, brown paper material. PLM analysis showed the sample did not contain asbestos.

The pipe insulation in the southwest building is in varying degrees of deterioration. Some of the insulation is in good condition, intact and well wrapped, and other is in poor condition, falling off of the pipes. Some of the pipe insulation appeared to be missing from the pipes, probably due to coming loose and falling to the floor. Most of the missing insulation could not be accounted for on the floor. It has probably been cleaned up. There was evidence that the floor of the building had been cleaned up. There were tractor tire tracks in the dust and what appeared to be freshly "swepted" areas. Mr. Mark Kootman stated that he was unaware of any recent cleanup that had taken place in the building.

Under the 2nd floor deck was about 90 lf of 2" diameter block-type insulated pipe, the insulation was damaged and a piece of the insulation was laying on the floor under the pipe. Sample SBR19-004 was obtained from the piece of insulation on the floor. The sample was light gray, fibrous and friable. PLM analysis showed the sample to contain 20% chrysotile asbestos.

A bathroom located on the southwest side of the building contained about 20 lf of 2" diameter block-type insulated pipe in very bad condition.

On the 2nd floor deck there was at least two pieces of insulation laying on the floor, which probably had fallen from deteriorating overhead pipe insulation.

Located on the 2nd floor deck was a mixing tank which appeared to contain transite residue. Around the access door hatch was over 12 cubic inches of gray friable material. Sample SBR19-006 was obtained from this material. The sample was gray, fibrous and friable. PLM analysis showed the sample to contain 15% chrysotile and 3% crocidolite asbestos. The crocidolite might be indicative of transite. Crocidolite was also found in samples taken from transite pipe debris along Maline Creek on 10/29/92.

The 3rd floor area contained about 48 lf of 2" diameter block-type insulated pipe in deteriorating condition.

A piece of old process equipment, located on the southwest side of the building was covered with about 67 square feet of exposed block-type insulation. Some had fallen off and was laying on the floor. Sample SBR19-001 was obtained from a piece of insulation which was laying on the floor. The insulation was light gray in color and friable. PLM analysis showed the sample to contain 12% amosite asbestos.

Laying on the floor, next to the equipment were three 4" diameter insulated pipes. They were insulated with a total of 55 lf of 1/4 inch thick woven cloth material. Sample SBR19-002 was obtained from the pipe insulation. PLM analysis showed that the sample contained no asbestos.

In summary, in the southwest building there is over 1545 lf of block-type pipe insulation, over 155 lf of paper-type pipe insulation, over 415 lf of cloth-type pipe insulation and about 67 ft^2 of block-type insulation. Some of the insulation is in poor condition and some has fallen off and is laying on the floor. Not all of the insulation missing off of the pipes can be accounted for but the amount is probably much greater than 50 lf. The area appears to have been recently swept.

The Northeast Building

The northeast building is currently used by Branch Metal Co. to store scrap metal. In the southeast end of the building there is a three story section adjacent to the southeast end wall which will be referred to as "area A". The adjoining room to the northwest of area A will be referred to as area B, and the room northwest of area B will be referred to as area C.

Before entering the northeast building, Mr. Hamera and I talked with Mr. Simmons who said that air monitoring had been conducted in the building and only one sample showed ACM fiber counts to be above the detection limit. He indicated that there were some ACM problems in the building but did not specify which kinds.

In area A of the northeast building, there were cutoff metal hangers suspended from the first floor and second floor ceilings. The cut metal hanger's surface was metallic in appearance, clean and not rusted like the rest of the metal hanger's surface. The metallic appearance might indicate that they had recently been cut. On the first story floor, directly below the line of cut hangers, there were four areas of chunks of block-type insulation. The four areas of insulation follow the line of cut hangers. The width of the building is about 150 feet and the cut hangers extended almost the entire width of the building on both the first and second floors.

The second floor of area A appeared to have been recently cleaned and there was cleaning being conducted on the third floor. The majority of the 2nd floor was swept except for debris at the northeast side of the floor, a pile of debris along the southeast wall and on the southwest side. The northeast pile contained bricks and other building debris. The pile on the southeast wall contained some pieces of material that appeared to be "aircell"-type pipe insulation. Two pieces were visible in the pile, 4 to 6 inches in length. The pile was next to a large opening in the southeast outside wall. The southwest pile of debris contained a large amount (greater than 2 cubic feet) of off-white, grayish friable material, from which sample SBR19-007 was obtained. PLM analysis showed the sample to contain 20% chrysotile and 1% crocidolite asbestos.

There was a group of three men on the third floor wetting and sweeping the floor. No pipe, cut hangers or insulation were seen on the third floor. I talked to the man who was giving cleanup instructions to the other two men and who appeared to be the foreman. I asked him if he knew if any pipes or pipe insulation had been removed from the building and he stated that he did not know of any and that they were there to clean the area.

In the large room (area B) northwest of the three story area (area A), there is a large amount of a suspicious block-type insulation material on the floor. The pieces of the material are scattered in a 25 ft^2 area. Sample SBR19-008 was obtained from this debris. The sample is light gray, friable and fibrous. PLM analysis of the sample showed it to contain 85% chrysotile asbestos.

There was evidence that a pipe was once suspended from the ceiling above this area because there is an intact existing 8" diameter block-type insulated pipe in area C. The pipe penetrates the dividing wall and is cut off as it enters area B. The cut is metallic colored and not rusted. In area B, there are also two other areas of block-type insulation debris on the floor under the suspected removed pipe

In area C, about 40 lf of a block-type insulated, 8" diameter pipe extends from the southeast wall. The pipe ends at a fresh pipe cut indicating some pipe was removed. There is no indication of any additional insulated pipe and no insulation was observed on the floor in area C.

Outside of the southeast end of the building there appeared to be some newly excavated soil. The excavated area extends almost the entire width of the building and extends 40 feet out from it. The area is right below the openings in the southeast walls of the 2nd and 3rd floors in area A. The dirt looked freshly excavated because the heavy rains had occurred two days earlier and there was no indication of water erosion. The tire tracks and excavation marks in the wet dirt were still sharp and distinct. There was at least five pieces of block-type insulation material visible on the surface. Sample SBR19-009 was obtained from one of the pieces in the excavation area. The sample was light gray, friable and fibrous. PLM analysis showed the sample to contain 60% chrysotile asbestos. There are marks on the outside wall indicating that some sort of debris had been piled up against the wall, probably dumped from the 2nd and 3rd floors. It is possible that the insulation debris was dumped from the 2nd or 3rd floors. There is also brick debris dumped on top of the excavation. It is possible that there is additional insulation under the surface.

Mr. Hamera and I asked Mr. Mark Kootman if he was aware of any pipe or pipe insulation removal and he stated that he was not aware of any pipe removal. Mr. Kootman was also asked if he

knew anything about the excavating activity on the southeast end of the building and he said he was unaware of any excavation activity. Mr. Kootman said that the building owners would be in charge of any cleanup or excavating activities.

I suggested to Mr. Kootman that the Branch Metal workers stay away from the contaminated areas. Mr. Kootman said that little activity takes place in that area so there would be no problems.

During the inspection, Mr. Hamera and I observed fork lift activity in the area, and we also observed a large metal container containing metal scrap being dropped on a pile of suspect ACM.

On the first floor of area A there are stored several 55 gallon drums. The covered drums are labelled as non-hazardous metal scrap. On the floor around the drums is what appears to be a spill of oil. It appears to be machine oil residue leaking from the barrels.

In summary, on the 1st and 2nd floors in area A of the northeast building, there appears to be at least 200 lf of cut pipe hangers and there is ACM debris below the cut hangers on the 1st floor. On the 2nd story of area A is a pile of ACM and there is evidence of some cleanup activities. The 3rd story was being cleaned, and no ACM was found. Area B contained large amounts of ACM debris on the floor and an insulated pipe from area C has been cutoff. ACM debris might have been dumped into a fresh excavation outside of area A, where ACM was found.

The Boiler House

The boiler house was locked and it appeared that any broken windows have been covered. The boiler house contains a large amount of ACM, some of which is in poor condition. The insulation appeared to be intact and undisturbed.

The Waste Pile

Between the CertainTeed and GAF properties is located the waste pile. The waste pile is covered with dirt and vegetative growth, and appears to be stable and in good condition. The waste pile area adjacent to Maline Creek was originally lined with rip-rap to prevent erosion of the creek bank and inundation into the waste pile. It appears that most of the rip-rap has been washed away, or has fallen into the creek. Without some sort of bank stabilization, the creek will continue to erode the bank and compromise the waste pile.

The GAF Facility

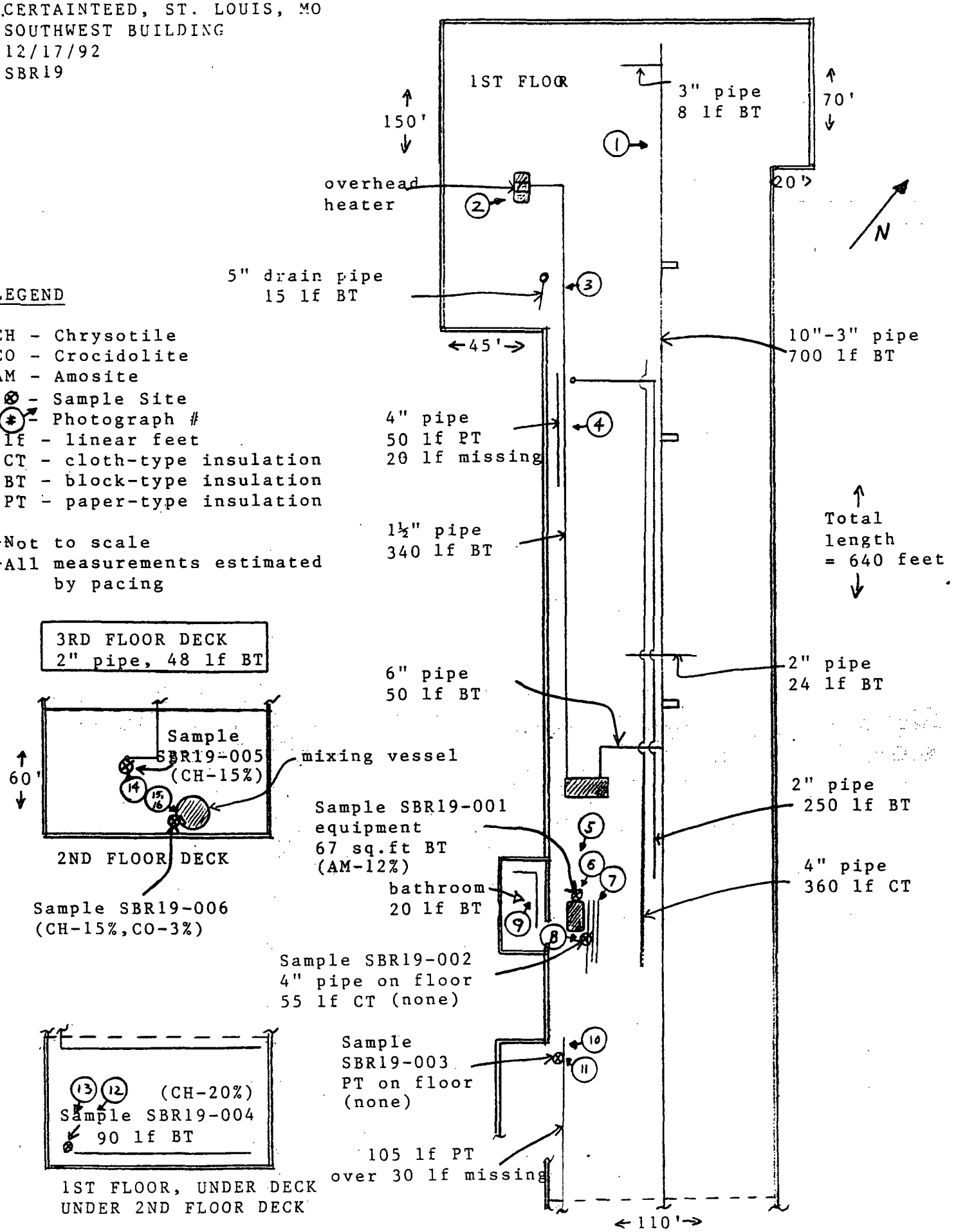
A tour inside of the old GAF transite facility was also conducted. The building is currently used as a warehouse. The building has been renovated and there was no suspect ACM observed.

Attachments

1. Sample Site Diagram, 2 pages.
2. Sample Summary Sheet, 1 page.
3. Chain of Custody Sheet, 1 page.
4. Sample Analysis, 5 pages.
5. Quantification of Material Sheet, 1 page.
6. Photographs, 11 pages.

ATTACHMENT 1

CERTAINTEED, ST. LOUIS, MO
SOUTHWEST BUILDING
12/17/92
SBR19

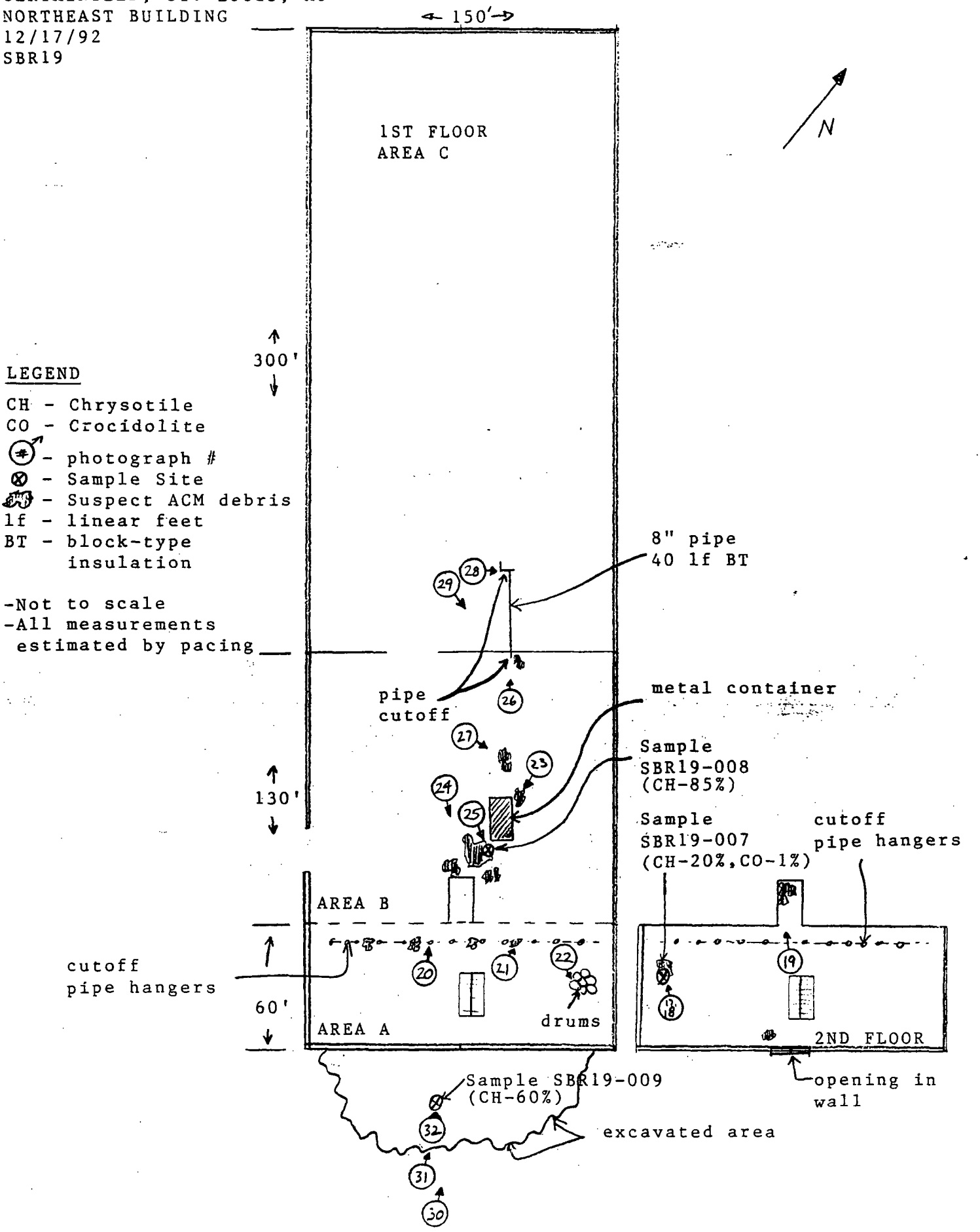


LEGEND

CH - Chrysotile
CO - Crocidolite
AM - Amosite
⊗ - Sample Site
(*) - Photograph #
lf - linear feet
CT - cloth-type insulation
BT - block-type insulation
PT - paper-type insulation

-Not to scale
-All measurements estimated by pacing

CERTAINTEED, ST. LOUIS, MO
NORTHEAST BUILDING
12/17/92
SBR19



ATTACHMENT 2

SAMPLE SUMMARY SHEET

Facility: CertainTeed

Address: St. Cyr Street, St. Louis, MO

Sampled by: Paul E. Beatty

Agency: U.S. EPA, Region VII

Date: 12/17/92 Activity #: SBR19

Sample#	Sample Site * (see site map)	Sample Description	Quantity of ACM	Analysis Results	Photo #
SBR19-001	SW building. Equipment insulation.	Light gray, friable, fiberous. Block-type sheet insulation.	-	Amosite, 12%	5,6
SBR19-002	SW building. Pipes on floor.	1/4" thick, tan woven pipe insulation. Friable, very fiberous.	-	no asbestos	7,8
SBR19-003	SW building. On floor.	Brown paper pipe insulation. Friable, fiberous.	-	no asbestos	10,11
SBR19-004	SW building. On floor, south corner.	Light gray, friable, fiberous Block-type pipe insulation.	-	CHRY, 20%	12,13
SBR19-005	SW building, 2nd floor.	Light gray, friable, fiberous Deteriorating block-type pipe insulation.	-	CHRY, 15%	14
SBR19-006	SW building, 2nd floor. Mixing vessel hatchway.	Gray, friable, fiberous.	-	CHRY, 15% CROC, 3%	15,16
SBR19-007	NE building, area A, 2nd floor.	Light gray, friable, fiberous. Block-type insulation.	-	CHRY, 20% CROC, 1%	17,18
SBR19-008	NE building, area B. Floor.	Light gray, friable, fiberous. Block-type insulation.	-	CHRY, 85%	24,25
SBR19-009	Outside NE building, SE side. Excavated area.	Light gray, friable, fiberous. Block-type insulation.	-	CHRY, 60%	31,32

* Locate on site diagram.
(rev:3/4/92)

ATTACHMENT 3

Rm 152

12/22/92

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

ACTIVITY LEADER(Print)	NAME OF SURVEY OR ACTIVITY	DATE OF COLLECTION (DAY / MONTH / YEAR)	SHEET
PAUL E. BEATTY	CERTAIN TEED	17 / 12 / 92	1 of 1

CONTENTS OF SHIPMENT

SAMPLE NUMBER	TYPE OF CONTAINERS: ~~PLASTIC BOTTLE~~ CUBITAINER	BOTTLE	BOTTLE	BOTTLE	VOA SET (2 VIALS EA)	SAMPLED MEDIA: water	soil	sediment	dust	other	RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	NUMBERS OF CONTAINERS PER SAMPLE NUMBER										
SBR19-ØØ1	1									X	ASBESTOS ANALYSIS
SBR19-ØØ2	1									X	"
SBR19-ØØ3	1									X	"
SBR19-ØØ4	1									X	"
SBR19-ØØ5	1									X	"
SBR19-ØØ6	1									X	"
SBR19-ØØ7	1									X	"
SBR19-ØØ8	1									X	"
SBR19-ØØ9	1									X	"

DESCRIPTION OF SHIPMENT

1 PIECE(S) CONSISTING OF _____ BOX(ES)

_____ ICE CHEST(S); OTHER 2¢ LOCK PLASTIC BAG

MODE OF SHIPMENT

_____ COMMERCIAL CARRIER: _____

_____ COURIER

X SAMPLER CONVEYED

_____ (SHIPPING DOCUMENT NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER)	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
Paul E. Beatty ☐ SEALED ☒ UNSEALED	12/22/92	1:20	Nicole Robles ☐ SEALED ☒ UNSEALED	LAB ANALYSIS
RELINQUISHED BY ☐ SEALED ☐ UNSEALED	DATE	TIME	RECEIVED BY ☐ SEALED ☐ UNSEALED	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY ☐ SEALED ☐ UNSEALED	DATE	TIME	RECEIVED BY ☐ SEALED ☐ UNSEALED	REASON FOR CHANGE OF CUSTODY

7-EPA-9262(Revised 5/85)

ATTACHMENT 4

ANALYSIS REQUEST REPORT — VALIDATED DATA

FOR ACTIVITY: SBR19

BEATTY, P. — 01/14/93 09:38:50 — ALL REAL SAMPLES AND FIELD Q.C.

* FINAL REPORT

FY: 93 ACTIVITY: SBR19 DESCRIPTION: CERTAIN TEED LOCATION: ST. LOUIS MISSOURI

STATUS: ACTIVE TYPE: SAMPLING - IN HOUSE ANALYSIS PROJECT: S13

LABO DUE DATE IS 12/24/92. REPORT DUE DATE IS 12/27/92.

INSPECTION DATE: 12/17/92 ALL SAMPLES RECEIVED DATE: 12/22/92

ALL DATA APPROVED BY LABO DATE: 01/11/93 FINAL REPORT TRANSMITTED DATE: 00/00/00

EXPECTED LABO TURNAROUND TIME IS 2 DAYS EXPECTED REPORT TURNAROUND TIME IS 10 DAYS

ACTUAL LABO TURNAROUND TIME IS 20 DAYS ACTUAL REPORT TURNAROUND TIME IS 0 DAYS

SITE CODE: SITE:

SAMP. NO.	QCC	M	DESCRIPTION	SAMPLE # STATUS	CITY	STATE	AIRS/ STORET LOC	NO	SECT	LAY-ER	BEG. DATE	BEG. TIME	END. DATE	END. TIME
001		S	ACM-CERTAIN TEED	1	ST. LOUIS	MISSOURI					12/17/92	:	12/17/92	:
002		S	ACM-CERTAIN TEED	1	ST. LOUIS	MISSOURI					12/17/92	:	12/17/92	:
003		S	ACM-CERTAIN TEED	1	ST. LOUIS	MISSOURI					12/17/92	:	12/17/92	:
004		S	ACM-CERTAIN TEED	1	ST. LOUIS	MISSOURI					12/17/92	:	12/17/92	:
005		S	ACM-CERTAIN TEED	1	ST. LOUIS	MISSOURI					12/17/92	:	12/17/92	:
006		S	ACM-CERTAIN TEED	1	ST. LOUIS	MISSOURI					12/17/92	:	12/17/92	:
007		S	ACM-CERTAIN TEED	1	ST. LOUIS	MISSOURI					12/17/92	:	12/17/92	:
008		S	ACM-CERTAIN TEED	1	ST. LOUIS	MISSOURI					12/17/92	:	12/17/92	:
009		S	ACM-CERTAIN TEED	1	ST. LOUIS	MISSOURI					12/17/92	:	12/17/92	:

EXPLANATION OF CODES AND INFORMATION ON ANALYSIS REQUEST DETAIL REPORT

SAMPLE INFORMATION:

SAMP. NO. = SAMPLE IDENTIFICATION NUMBER (A 3-DIGIT NUMBER WHICH IN COMBINATION WITH THE ACTIVITY NUMBER AND QCC, PROVIDES AN UNIQUE NUMBER FOR EACH SAMPLE FOR IDENTIFICATION PURPOSES)

QCC = QUALITY CONTROL CODE (A ONE-LETTER CODE USED TO DESIGNATE SPECIFIC QC SAMPLES. THIS FIELD WILL BE BLANK FOR ALL NON-QC OR ACTUAL SAMPLES):
- A = TRUE VALUE FOR CALIBRATION STANDARD
- B = CONCENTRATION RESULTING FROM DUPLICATE LAB SPIKE
- C = MEASURED VALUE FOR CALIBRATION STANDARD
- D = MEASURED VALUE FOR FILED DUPLICATE
- F = MEASURED VALUE FOR FIELD BLANK
- G = MEASURED VALUE FOR METHOD STANDARD
- H = TRUE VALUE FOR METHOD STANDARD
- K = CONCENTRATION RESULTING FROM DUPLICATE FIELD SPIKE
- L = MEASURED VALUE FOR LAB DUPLICATE
- M = MEASURED VALUE FOR LAB BLANK
- N = MEASURED VALUE FOR DUPLICATE FIELD SPIKE
- P = MEASURED VALUE FOR PERFORMANCE STANDARD
- R = CONCENTRATION RESULTING FROM LAB SPIKE
- S = MEASURED VALUE FOR LAB SPIKE
- T = TRUE VALUE OF PERFORMANCE STANDARD
- W = MEASURED VALUE FOR DUPLICATE LAB SPIKE
- Y = MEASURED VALUE FOR FIELD SPIKE
- Z = CONCENTRATION RESULTING FROM FIELD SPIKE

M = MEDIA CODE (A ONE-LETTER CODE DESIGNATING THE MEDIA OF THE SAMPLE):
- A = AIR
- H = OTHER (DOES NOT FIT ANY OTHER CATEGORY)
- S = SOLID (SOIL, SEDIMENT, SLUDGE)
- T = TISSUE (PLANT & ANIMAL)
- W = WATER (GROUND WATER, SURFACE WATER, WASTE WATER, DRINKING WATER)

DESCRIPTION = A SHORT DESCRIPTION OF THE LOCATION WHERE SAMPLE WAS COLLECTED

AIRS/STORET LOC. NO. = THE SPECIFIC LOCATION IDENTIFICATION NUMBER FOR EITHER OF THESE NATIONAL DATABASE SYSTEMS, AS APPROPRIATE

DATE/TIME INFORMATION = SPECIFIC INFORMATION REGARDING WHEN THE SAMPLE WAS COLLECTED
- BEG. DATE = DATE SAMPLING WAS STARTED
- BEG. TIME = TIME SAMPLING WAS STARTED
- END DATE = DATE SAMPLING WAS COMPLETED
- END TIME = TIME SAMPLING WAS COMPLETED
- NOTE: A GRAB SAMPLE WILL CONTAIN ONLY BEG. DATE/TIME
  A TIMED COMPOSITE SAMPLE WILL CONTAIN BOTH BEG AND END DATE/TIME TO DESIGNATE DURATION OF SAMPLE COLLECTION

OTHER CODES:
- V = VALIDATED

ANALYTICAL RESULTS/MEASUREMENTS INFORMATION:

COMPOUND = MGP (MEDIA-GROUP-PARAMETER) CODE AND NAME OF THE MEASURED CONSTITUENT OR CHARACTERISTIC OF EACH SAMPLE

UNITS = SPECIFIC UNITS IN WHICH RESULTS ARE REPORTED:
- C = CENTIGRADE (CELSIUS) DEGREES
- CFS = CUBIC FEET PER SECOND
- GPM = GALLONS PER MINUTE
- IN = INCHES
- I.D. = SPECIES IDENTIFICATION
- KG = KILOGRAM
- L = LITER
- LB = POUNDS
- MG = MILLIGRAMS (1 X 10-3 GRAMS)
- MGD = MILLION GALLONS PER DAY
- MPH = MILES PER HOUR
- MV = MILLIVOLT
- M/F = MALE/FEMALE
- M2 = SQUARE METER
- M3 = CUBIC METER
- NA = NOT APPLICABLE
- NG = NANOGRAMS (1 X 10-9 GRAMS)
- NTU = NEPHELOMETRIC TURBIDITY UNITS
- PC/L = PICO (1 X 10-12) CURRIES PER LITER
- PG = PICOGRAMS (1 X 10-12 GRAMS)
- P/CM2 = PICOGRAMS PER SQUARE CENTIMETER
- SCM = STANDARD CUBIC METER (1 ATM, 25 C)
- SQ FT = SQUARE FEET
- SU = STANDARD UNITS (PH)
- UG = MICROGRAMS (1 X 10-6 GRAMS)
- UMHOS = MICROMHOS/CM (CONDUCTIVITY UNITS)
- U/CC2 = MICROGRAMS PER 100 SQUARE CENTIMETERS
- U/CM2 = MICROGRAMS PER SQUARE CENTIMETER
- 1000G = 1000 GALLONS
- +/- = POSITIVE/NEGATIVE
- # = NUMBER

DATA QUALIFIERS = SPECIFIC CODES USED IN CONJUNCTION WITH DATA VALUES TO PROVIDE ADDITIONAL INFORMATION ON THE REPORTED RESULTS, OR USED TO EXPLAIN THE ABSENCE OF A SPCIFIC VALUE:
- BLANK = IF FIELD IS BLANK, NO REMARKS OR QUALIFIERS ARE PERTINENT. FOR FINAL REPORTED DATA, THIS MEANS THAT THE VALUES HAVE BEEN REVIEWED AND FOUND TO BE ACCEPTABLE FOR USE.
- I = INVALID SAMPLE/DATA - VALUE NOT REPORTED
- J = DATA REPORTED BUT NOT VALID BY APPROVED QC PROCEDURES
- K = ACTUAL VALUE OF SAMPLE IS < VALUE REPORTED
- L = ACTUAL VALUE OF SAMPLE IS > VALUE REPORTED
- M = DETECTED BUT BELOW THE LEVEL OF REPORTED VALUE FOR ACCURATE QUANTIFICATION
- O = PARAMETER NOT ANALYZED
- U = ACTUAL VALUE OF SAMPLE IS < THE MEASUREMENT DETECTION LIMIT (REPORTED VALUE)

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 3-SBR19 VALIDATED DATA

COMPOUND	UNITS	001	002	003	004	005
SB02 CHRYSOTILE, BULK	%	0.0	0.0	0.0	20	15
SB03 AMOSITE, BULK	%	12	0.0	0.0	0.0	0.0
SB04 CROCIDOLITE, BULK	%	0.0	0.0	0.0	0.0	0.0
SB05 TREMOLITE, BULK	%	0.0	0.0	0.0	0.0	0.0
SB06 ACTINOLITE, BULK	%	0.0	0.0	0.0	0.0	0.0
SB07 ANTHOPHYLLITE, BULK	%	0.0	0.0	0.0	0.0	0.0
ZZ01 SAMPLE NUMBER	NA	001	002	003	004	005
ZZ02 ACTIVITY CODE	NA	SBR19	SBR19	SBR19	SBR19	SBR19

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 3-SBR19 VALIDATED DATA

COMPOUND	UNITS	006	007	008	009	
SB02 CHRYSOTILE, BULK	%	15	20	85	60	
SB03 AMOSITE, BULK	%	0.0	0.0	0.0	0.0	
SB04 CROCIDOLITE, BULK	%	3	1	0.0	0.0	
SB05 TREMOLITE, BULK	%	0.0	0.0	0.0	0.0	
SB06 ACTINOLITE, BULK	%	0.0	0.0	0.0	0.0	
SB07 ANTHOPHYLLITE, BULK	%	0.0	0.0	0.0	0.0	
ZZ01 SAMPLE NUMBER	NA	006	007	008	009	
ZZ02 ACTIVITY CODE	NA	SBR19	SBR19	SBR19	SBR19	

ACTIVITY SBR19 CERTAIN TEED

THE PROJECT LEADER SHOULD CIRCLE ONE - STORET, AIRS, OR ARCHIVE.

CIRCLE ONE: STORET AIRS ARCHIVE

FINAL DATA REPORT APPROVED BY PROJECT LEADER ON 01/14/93 09:38:50 BY  .

ATTACHMENT 5

QUANTIFICATION OF MATERIAL

Southwest Building

Quantity (linear feet)	Size (inches in diameter)
Type: Pipe insulation, block-type	
700	3-10
8	3
340	1.5
15	5
50	6
20	
48+24+250	2
90	
1545	:Total
Type: Pipe insulation, paper-type	
50	4
105	
155	:Total
Type: Pipe insulation, cloth-type	
55	4
360	4
415	:Total

Type: Sheet, block-type - 67 ft²

ATTACHMENT 6

Photo #1
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, Area C.
4" diameter pipe, covered with thick cloth-type insulation.

Photo #2
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: NE building, Area C.
4" diameter pipe, covered with thick cloth-type insulation.

Photo #3
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building. Area C.
Pipe with deteriorating pipe insulation.

Photo #4
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building. Area B.
Panorama.

5

Photo #5
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building. Area B.
Panorama.

Photo #6
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building. Area B.
Panorama.

Photo #7
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building. Area B.
Panorama.

D

Photo #8
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building. Area B.
Panorama.


FLAT

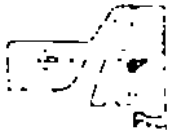


Photo #9
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building. Area B.
Panorama.

Photo #10
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building. Area B.
Panorama.

Photo #11
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building. Area B.
Northwest wall.
Note: Cutoff insulated pipe.

12

Photo #12
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building. Area B.
Northwest wall.
Note: Closeup of cutoff insulate pipe.

Photo #13
CertainTeed, St. Louis, MO
1/28/93
Activity #S8R31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building. Area B.
Disturbed ACM.

Photo #14
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building. Area B.
Disturbed ACM.

993

Photo #15
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: blank

Photo #16
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 1st Floor.
Cut metal hanger.

Photo #17
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 1st floor. Sample Site SBR31-001. On the floor below cut hanger in Photo #16.

Photo #18
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 1st floor.
Sample Site SBR31-001.


50

Photo #19
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 1st floor.
Sample Site SBR31-002.

Photo #20
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 1st floor.

Photo #21
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 1st floor.
Note: metal hangers on ceiling.

22

Photo #22
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building, area B.
Pipe covered with deteriorating insulation.

Photo #23
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area B.
Same insulated pipe as in Photo #22.

Photo #24
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building, area A, 2nd floor.
General area.
Note: Debris on floor.

Photo #25
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area B, 2nd floor.
General area.

Photo #26
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building, area A, 2nd floor into area B.
Note: ACM on floor.

Photo #27
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Northeast building, area A, 2nd floor.
Sample site SBR31-003.

Photo #28
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

1993

CAPTION: Northeast building, area A, 2nd floor.
Sample site SBR31-003.

Photo #29
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 2nd floor.
Felt material.

Photo #30
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 2nd floor.
Sample site SBR31-004 from material on post.

Photo #31
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 2nd floor.
Sample site SBR31-004.

Photo #32
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 3rd floor.
General area.

Photo #33
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 3rd floor.
General area.

Photo #34
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 3rd floor.
Opening in southeast wall.
Note: Debris pushed towards opening.

35

Photo #35
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 3rd floor.

1993

Photo #36
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

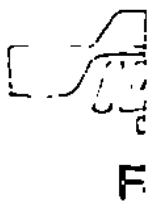
CAPTION: Northeast building, area A, 3rd floor.
Cut metal hangers.

1993

Photo #37
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 3rd floor.
Sample site SBR31-005.

Photo #38
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB



CAPTION: Northeast building, area A, 3rd floor.
Sample site SBR31-005.

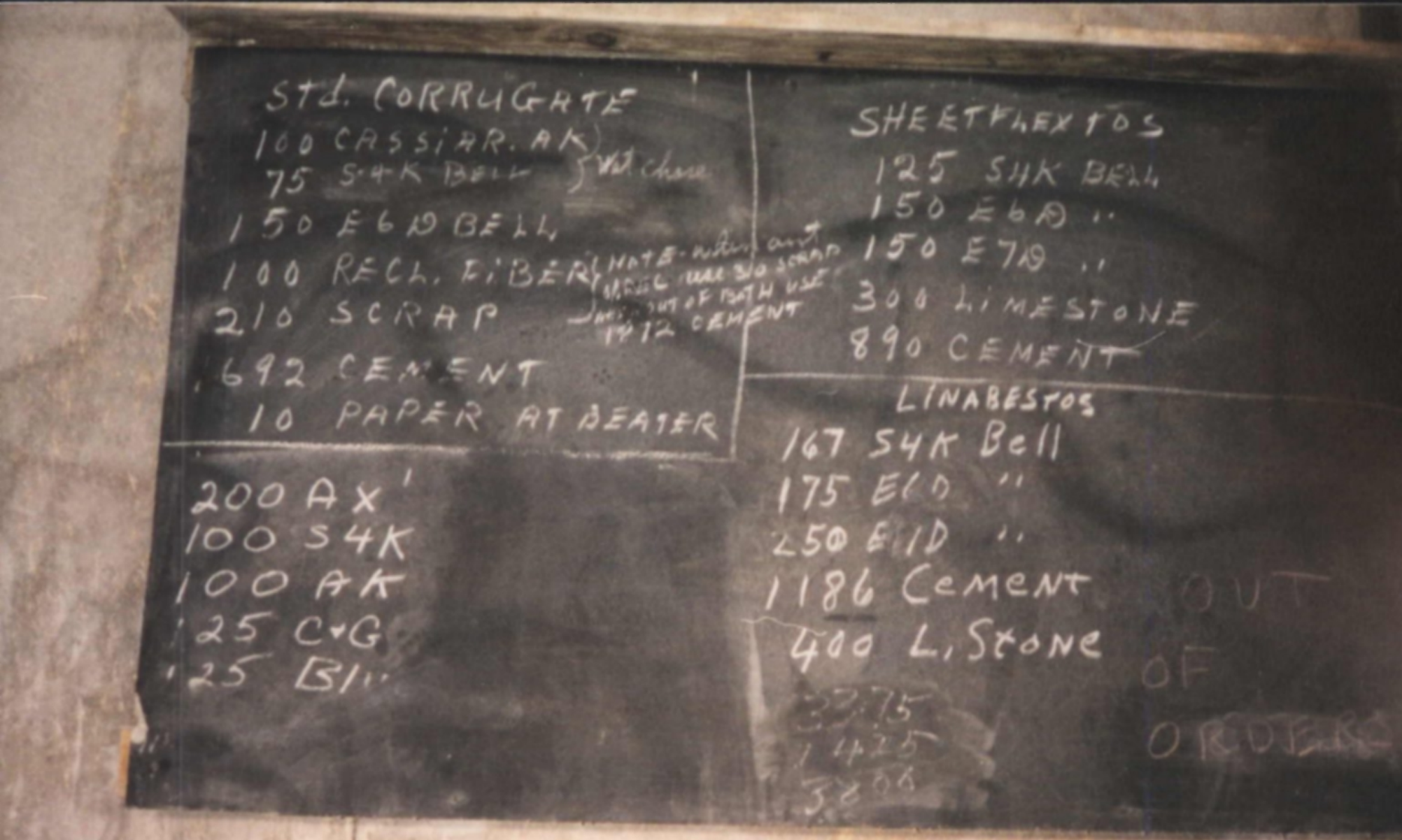

STD. CORRUGATE
100 CASSIAR. AK
75 S4K BELL
150 E6D BELL
100 RECL. FIBER
210 SCRAP
692 CEMENT
10 PAPER AT BEATER
SHEETFLEXTOS
125 S4K BELL
150 E6D "
150 E7D "
300 LIMESTONE
890 CEMENT
LINABESTOS
167 S4K Bell
175 E6D "
250 E7D "
1186 Cement
400 L. Stone
200 AX
100 S4K
100 AK
125 C-G
125 B1"
OUT
OF
ORDER

Photo #39
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 3rd floor.
Transite recipe board?

40

Photo #40
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 3rd floor.
Large pipe with felt insulation.

D

Photo #41
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, area A, 3rd floor.
Large pipe with felt insulation.

Photo #42
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Southwest building.

Photo #43
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Southwest building.

4A

Photo #44
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.

93

45

Photo #45
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.

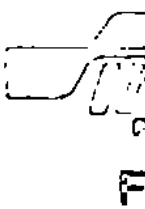


Photo #46
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Southwest building.
Cleaned manifold piping.

Photo #47
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building, covered area.
Mixing vessels.

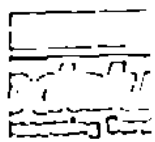
Photo #48
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building, covered area.
Sample site SBR31-006 from mixing vessel.

49

Photo #49
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty

CAPTION: Southwest building, covered area.
Transite debris on vessel opening.

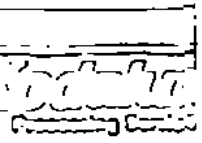


EB 199

D

Photo #50
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.
Tire tracks on floor.



FEB 199

D

Photo #51
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.
Tire tracks and debris on floor.

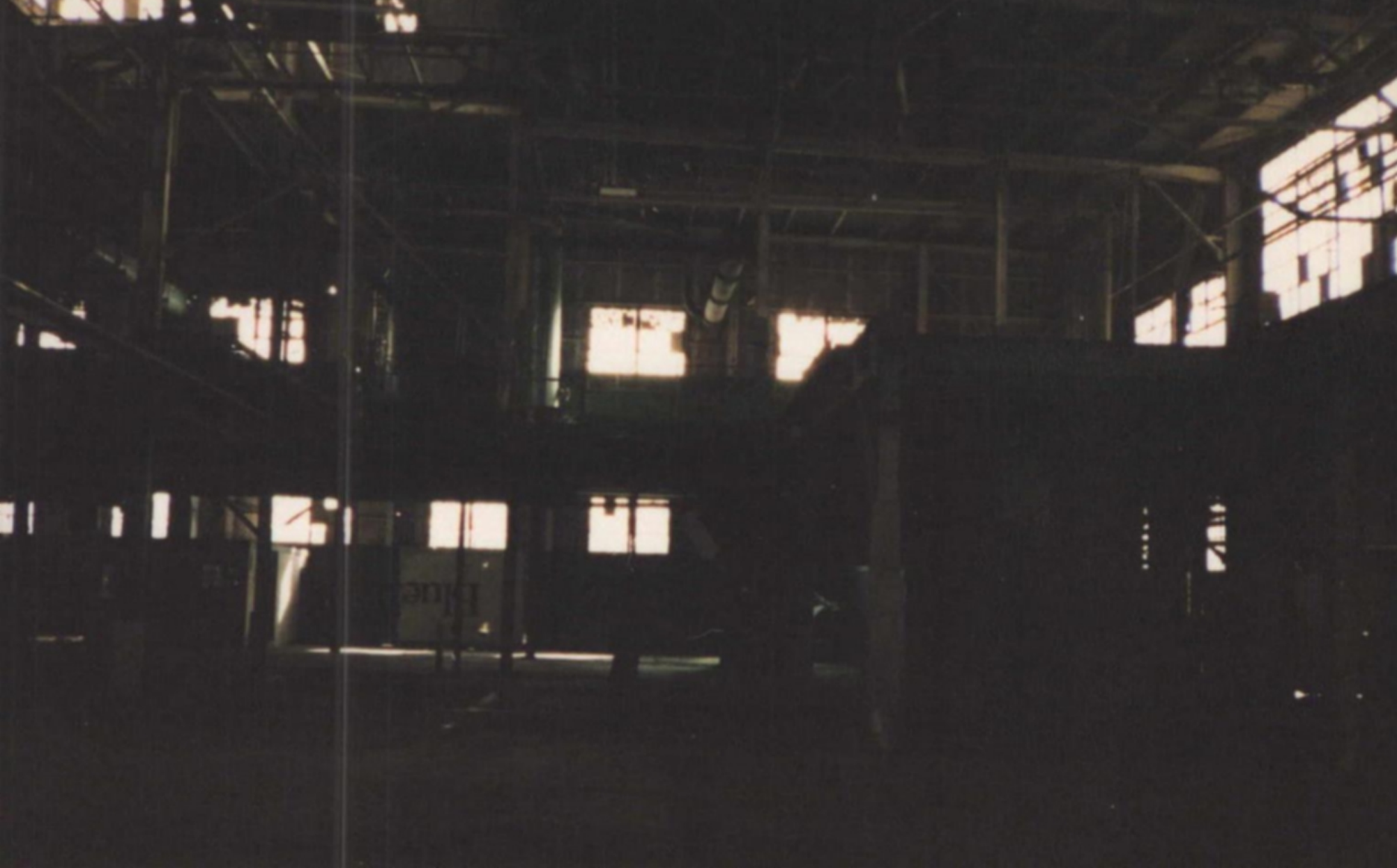
Photo #52
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.

Photo #53
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.

1993



54

Photo #54
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.

1993

Photo #55
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.
Transite debris in auger.

Photo #56
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.
Equipment and mixing vessel.

57

Photo #57
CertainTeed, St. Louis, MO
1/28/93
Activity #SBR31
Inspector: Paul E. Beatty PEB

CAPTION: Southwest building, 2nd floor.